AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1 - 74. (Cancelled)

75. (currently amended) A therapeutic nucleotide vaccine composition capable of eliminating pre-existing tumors and protecting against a tumor relapse, the composition comprising a combined mixture of:

a nucleotide sequence encoding ~~an~~ a tumor associated antigen, ~~and~~ provided in a vector~~, the nucleotide sequence~~ and under transcriptional control of a promoter, ~~wherein~~ said vector ~~comprises~~ further comprising an unmethylated cytidine phosphate guanosine (CpG) sequence, and said vector is selected from at least one of virus vector, non-viral vector, plasmid, microbe-derived vector, liposome and small molecule carrier; and

professional antigen-presenting cells in the form of dendritic cells expressing Toll-like receptor 9 and modified ~~to express one~~ for expression of at least one of CD40 ligand and GM-CSF~~, the CD40 ligand and GM-CSF~~ encoded by a nucleotide sequence engineered into said antigen-presenting cells.

76. (currently amended) The vaccine composition according to claim 75, wherein said vaccine composition is provided as a pre-incubated combined mixture of said nucleotide sequence and said modified antigen-presenting cells.

77. (canceled)

78. (currently amended) The vaccine composition according to claim 75, wherein said professional antigen-presenting cells are plasmacytoid dendritic cells.

79. (currently amended) The vaccine composition according to claim 75, wherein said professional antigen-presenting cells are human equivalents to a subclass of dendritic cells that express CD8α, B220, CD11C and B7 molecules in mice.

80. (currently amended) The vaccine composition according to claim 75, wherein said professional antigen-presenting cells express a P2 receptor.

81. (currently amended) The vaccine composition according to claim 75, wherein said professional antigen-presenting cells can be induced to produce type I interferon-alpha and/or interferon-beta.

82. (currently amended) The vaccine composition according to claim 75, wherein said professional antigen-presenting cells are modified ~~to express~~ for expression of said CD40 ligand.

83. (currently amended) The vaccine composition according to claim 75, wherein said tumor-associated antigen comprises ~~the~~ an e1a2 fusion peptide defined [[as]] by the amino acid sequence of SEQ ID NO: 5.

84. (currently amended) A nucleotide vaccine composition comprising a mixture of:

a nucleotide sequence encoding an antigen, wherein said nucleotide sequence comprises a nucleotide sequence of the mini-e1a2 fusion gene of SEQ ID NO: 3; and

antigen-presenting cells modified ~~to express~~ for expression of at least one immune response modulating molecule selected from CD40 ligand and GM-CSF.

85. (currently amended) A nucleotide vaccine composition comprising a mixture of:

a nucleotide sequence encoding an antigen, wherein said nucleotide sequence comprises a nucleotide sequence encoding the mini-e1a2 fusion protein of SEQ ID NO: 4; and

antigen-presenting cells modified ~~to express~~ for expression of at least one immune response modulating molecule selected from CD40 ligand and GM-CSF.

86. (currently amended) A method of producing a therapeutic vaccine composition capable of eliminating pre-existing tumors and protecting against a tumor relapse comprising the steps of:

providing a nucleotide sequence encoding ~~an~~ a tumor-associated antigen, ~~and~~ provided in a vector~~, the nucleotide sequence~~ and under transcriptional control of a promoter, ~~wherein~~ said vector ~~comprises~~ further comprising an unmethylated cytidine phosphate guanosine (CpG) sequence and, said vector is selected from at least one of virus vector, non-viral vector, plasmid, microbe-derived vector, liposome and small molecule carrier;

providing professional antigen-presenting cells in the form of dendritic cells expressing Toll-like receptor 9 and modified ~~to express~~ for expression of at least one of CD40 ligand and GM-CSF~~, the CD40 ligand and GM-CSF~~ encoded by a nucleotide sequence engineered into said antigen-presenting cells; and

mixing together said nucleotide sequence encoding said tumor-associated antigen and said modified antigen-presenting cells to form a combined mixture.

87. (currently amended) The method according to claim 86, further comprising ~~the~~ a step of pre-incubating said nucleotide sequence encoding said antigen with said modified antigen-presenting cells for enhancing their binding and interaction.

88. (currently amended) The method according to claim 86, wherein said providing a nucleotide sequence ~~providing~~ step comprises the steps of:

providing a MHC-binding antigenic protein or peptide;

cloning a nucleotide sequence encoding said MHC-binding antigenic protein or peptide into said vector; and

propagating said vector in a propagation system.

89. (currently amended) The method according to claim 86, wherein said providing professional antigen-presenting cells step comprises the steps of:

isolating said professional antigen presenting cells from a subject; and

engineering said professional antigen-presenting cells to express one of CD40 ligand and GM-CSF.

90. (canceled)

91. (new) the vaccine composition according to claim 75, wherein said tumor-associated antigen is a *bcr-abl* fusion protein antigen.